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FOREWORD

The Procedia contains 85 of 1359 papers presented in the 2011 IUMRS International Conference in Asia (ICA) held in Taipei, Taiwan, ROC during the period of September 19 to 22, 2011. There were more than 1000 attendees from 24 countries to participate in this materials science meeting.

This Conference consists of six symposia, with the first Symposium (A) devoted primarily to the Energy and Green Materials (pp.2-120) covering several topics, namely, A1. inorganic solar cells, A4. fuel cells, A5. photo catalytic materials and applications on energy and environment, and A7. materials for nuclear power applications. The second Symposium (B) is devoted to Biological Materials (pp.121-185) including the following topics: B1. bio-medical materials, B2. biocompatible and biodegradable materials, B3. nanotechnology for bio/medical materials, and B6. materials for implant. The seven papers in the third Symposium (C) focus on Materials Modeling, Simulation, and Characterization (pp.186-225). The fourth Symposium (D) Advanced Structural Materials (pp.226-373) is devoted to D1. light metals, D2. bulk metallic glasses and high-entropy alloys, D3. advanced technology for steels and other metals, D4. composite materials, and D5. coating and surface protection. The fifth Symposium (E) Electronic, Optoelectronic, and Photonic Materials (pp.374-487) is devoted to E1. oxide/nitride for electronic applications, E2. ferroelectric, piezoelectric, and dielectric materials, E3. optoelectronic/photonic related materials, E4. organic, molecular, and flexible electronics, E6. materials for Si/Ge based electronics, and E7. materials for emerging packaging and interconnect technologies. The last Symposium (F) Novel Functional Materials (pp.488-596) is devoted to F1. advanced magnetic and superconducting materials, F3. carbon-based materials, F4. emerging processing technology, F5. material technology for integrated passive/active components, and F6. structures and functionalities of colloids, supramolecules and soft matter with complexity.

We would like to thank the sponsoring organizations, members in the program committee, and all the presenters for their financial support, selecting, and contributing papers to make the Conference a success. Special thanks are due to Ms. Feng-Chen Hsu for her skillful and conscientious assistances in producing this volume.

Chien-Min Wang
Cheng-Jien Peng

Fellow/Editors, MRS-Taiwan
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